

(19)



JAPANESE PATENT OFFICE

PATENT ABSTRACTS OF JAPAN

(11) Publication number: **2001165412 A**(43) Date of publication of application: **22.06.01**

(51) Int. Cl.

F23D 14/16
F23D 14/12(21) Application number: **11349528**(22) Date of filing: **08.12.99**(71) Applicant: **TOKYO GAS CO LTD.**(72) Inventor: **FUJIMINE TOMOYA**
NAGAYAMA SATOSHI**(54) RADIANT TUBE WITH SURFACE COMBUSTION BURNER****(57) Abstract**

PROBLEM TO BE SOLVED: To provide a radiant tube with a surface combustion burner, which can keep flame temperature low resulting in the lowered NOx level by adapting a premixing-lean burning process with highly excessive air.

SOLUTION: The tube 11 is provided with a mixing section 12 on the one end thereof for mixing air for combustion with fuel gas, wherein an air tubing 14 for inducing the air, as well as a gas tubing 15 for inducing the fuel gas are connected to the mixing section 12. A sparking rod 16 is fixed to the mixing section 12 with its distal end protruded into the tube 11. A burner element 17 with a combustion surface of a generally conical shape is mounted on an outlet through which premixed gas is discharged from the mixing section 12 into the tube 11. Such the burner element 17 is fabricated in such a way that a knit-like special heat resistant metal fabric

17b is directly welded onto an expansive metallic conical meshwork 17a.

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